



EchoStar

Recent divestiture creates pure-play growth engine

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1. Investment Recommendation

EchoStar Investment Recommendation

Recommendation: BUY

Stock Price 11/15/19: \$40.51

Target Price: \$54.00 (~33% upside)

Market Cap: \$3.9B

EV / Sales: 2.0x

52 -Week H/L: \$27.22 / \$43.04

Strengths

- Market leader with ~69% share among U.S. satellite broadband providers
- Spin & merger of legacy broadcast assets unlocks value & creates pure-pay leader in high growth area
- Increasingly diverse geographical mix creates actionable growth opportunity
- Strong leadership headlined by industry thought leader

Company Story

- EchoStar was founded in 1980 by Charlie Ergen. The Company launched its first satellite in 1995. In 1996 SATS established its DISH Network brand to market TV services.
- On January 2nd, 2008 the DISH business demerged from the technology side of the business creating two standalone companies; EchoStar Corporation & DISH Network Corp.
- In 2011, EchoStar acquired Hughes Communications, the world's leading provider of satellite broadband for home and office users, for a total consideration of \$1.3B.
- In 2017 SATS sold back its broadband set-top box business to DISH. Further divestment occurred in 2019 with the sale of EchoStar's Broadcast Satellite Services (BSS) business to DISH.

Valuation & Future Expectations

- SATS saw shares rally following a strong third quarter (beat EPS by \$0.20). We see recent positive sentiment (significant HF buying in most recent 13-F filings) as the beginning of a long share appreciation runway for the Company.
- The Company in its current state represents an opportunity to invest in an overlooked, pure-play growth engine which has historically been dragged-down by an underperforming broadcast segment.
- We believe multiples will re-rate over coming quarters as investors come to appreciate the attractiveness of the new model. Our valuation range reflects EV/EBITDA & EV/Sales multiple ranges of 6.8x - 8.7x and 2.8x - 4.0x, respectively.
- A lengthy growth runway in emerging markets combined with strong demand for the Company's next satellite, margin expansion from mix shifts and market leading share and management creates significant upside for SATS.

Risks to Our Valuation

- **Pressure from Competition:** Entrance of SpaceX (Starlink) and Jeff Bezos (Blue Origin) into the broadband satellite space
- **Execution Risk:** Timing of capital expenditures, execution of joint ventures and management of future M&A activity
- **International Operations:** Exposure to more volatile developing economies, complexity of international regulation

2. EchoStar Situation Overview

EchoStar Business Overview

Company Description

- EchoStar Corporation (NYSE: SATS) is a global provider of broadband satellite technologies, broadband internet services for home and small office customers, satellite operations and satellite services.
- The Company delivers innovative network technologies, managed services and various communications solutions for aeronautical, enterprise and government customers.
- As of September 30, 2019, SATS' satellite fleet consisted of nine satellites, six of which are owned and three of which are leased.
- Operations are divided into two segments: Hughes and EchoStar Satellite Services (ESS).
- End markets for the Company's services range from consumers to small & medium enterprises and governments.

Segment Highlight: Hughes

- The Hughes segment is a global provider of broadband satellite technologies and broadband internet services to home and small office customers
- It currently uses capacity from three satellites (SPACEWAY 3, EchoStar XVII and EchoStar XIX) and additional satellite capacity acquired from multiple third-party providers
- In 2018, HughesNet continued to be the #1 consumer satellite Internet service, reaching ~1.4 million subscribers and capturing approximately 69% of U.S. satellite broadband market share

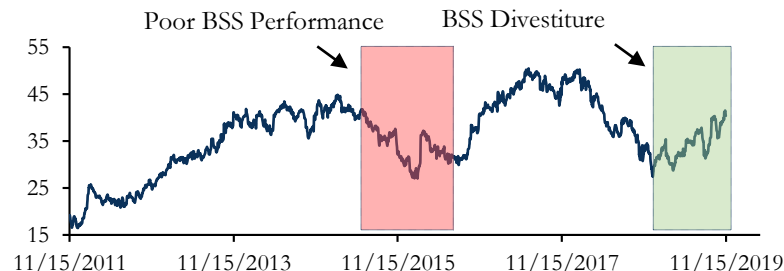
Key Facts & Figures

- **Headquarters:** Englewood, CO
- **Employees:** 2,200
- **Year Founded:** 1980
- **TTM Revenues:** \$2.1B
- **TTM EBITDA:** \$784.9MM
- **Enterprise Value:** \$3.9B
- **Market Capitalization:** \$4.0B

EchoStar Situation Overview

Key Facts

- EchoStar's share performance has experienced a period of volatility this year related to the BSS divestiture. The company has since stabilized as they beat earnings this quarter and long-term outlook is favorable.



Company Performance

- EchoStar completed the spin-off to DISH of the BSS business and the ancillary assets and liabilities in exchange for DISH shares that were then distributed to EchoStar's shareholders.
- In October, the company announced the acquisition of Helios Wire Corporation, which holds global spectrum rights for S-band mobile satellite services.
- These transactions support its strategy of being a global connectivity provider for people, enterprise and things. The company continues to deliver solid financial results. Management continues to focus on operating the business in an efficient manner while balancing short and long-term opportunities.

Industry Summary

- The Satellite Telecommunications Providers industry provides telecommunications connections via satellite for broadcasters and other providers. The industry includes establishments that own and operate satellites as well as operations that resell transmission capacity.
- Since network expansion is time- and capital-intensive, industry growth is sporadic.
 - For example, revenue growth may rapidly increase with the launch of a new satellite and decelerate once it reaches saturation.
- Industry services have become more vital as the development of the direct-to-home TV market, the expansion of satellite broadband internet services and the advancement of digital technology have fueled downstream demand.

Industry Dynamics

1 Rivalry in the Industry: **High**

- Competition to deliver the best price and internet speeds has led to intense pricing pressures

2 Power of Suppliers: **High**

- Suppliers are very specialized and there is a low presence of substitute inputs
- Products in this space are complex and often contain components and parts that are made by a single supplier

3 Threat of New Entrants: **Low**

- High initial investment required to gain foothold in the industry
- Regulatory, legal, and policy prevent access by new players

4 Power of Customers: **Low / Medium**

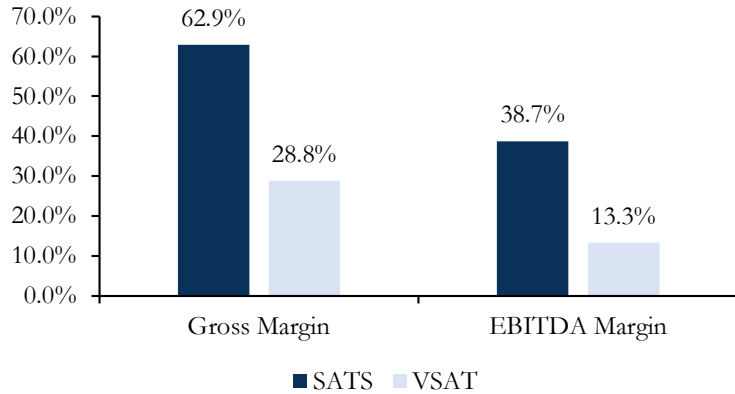
- Limited product offerings and substitutes in rural areas
- Consumers are sensitive to price and switching costs are higher considering target regions

5 Threat of Substitutes: **Low**

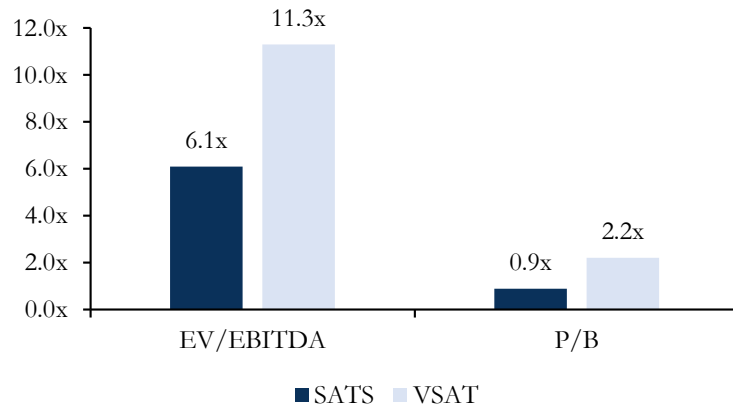
- Target areas that do not have access to standard connections such as Wi-Fi, cable modems, and subscriber lines

Competitive Landscape

Gross & EBITDA Margins⁽¹⁾



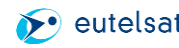
EV / EBITDA & P/B⁽²⁾



Main Competitor – Viasat

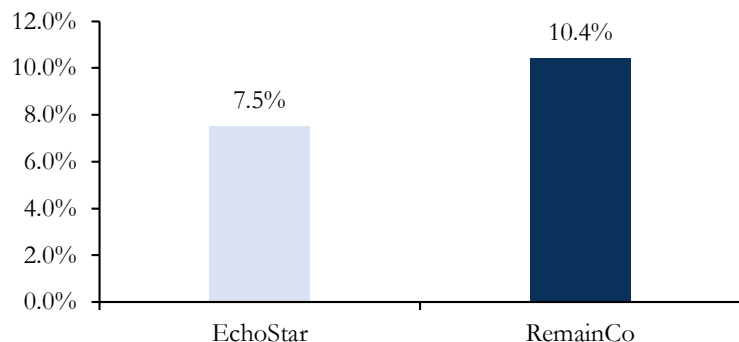
Viasat provides digital satellite, networking, and signal processing equipment for government and commercial clients.

- The company makes secure networking products for tactical communications and mobile satellite communications systems designed for military use.
- For the commercial market, Viasat produces satellite broadband systems for consumer applications as well as antenna systems, and mobile satellite systems.

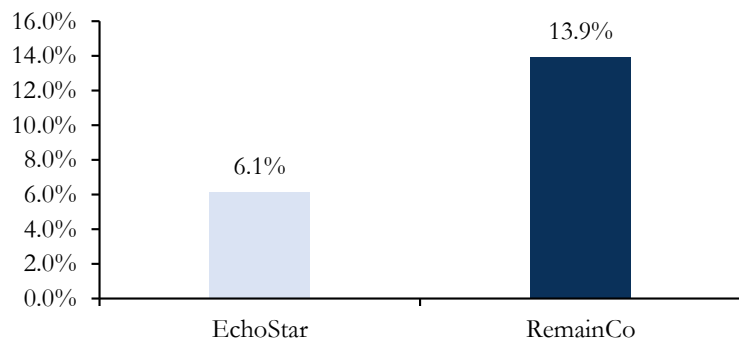


Thesis Point 1: BSS Divestiture

2016 – 2018 Revenue CAGR



2016 – 2018 EBITDA CAGR



Strategic Rationale

On September 11th, EchoStar completed its divestiture of the company's Broadcast Satellite Services ("BSS") business to DISH Networks. The transaction included the spin-off and merger of EchoStar's business that manages, markets and provides broadcast satellite services to companies including DISH and Dish MX. The total transaction equity value was **\$793.9M**.

Focuses EchoStar on Core Growth Business

- Divesting less-strategic and negative growth BSS satellite business to focus on higher quality, growing broadband market
- Remaining ESS customer-base has subscriber growth at +14.6% CAGR since 2016
- SATS maintains ~69% market share among U.S. satellite broadband subscribers post-acquisition

Long-Term Strategic Positioning

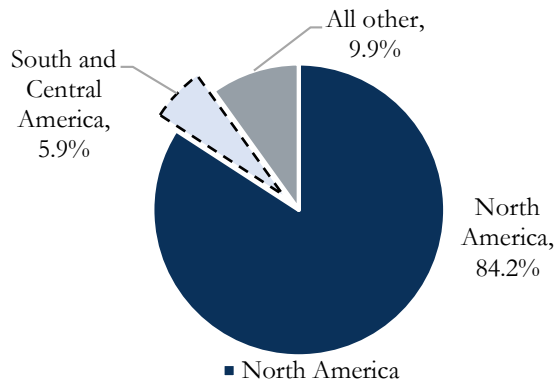
- Clearer business focus and simplified ownership structure will provide a better platform to pursue strategic opportunities

Accretive to Growth

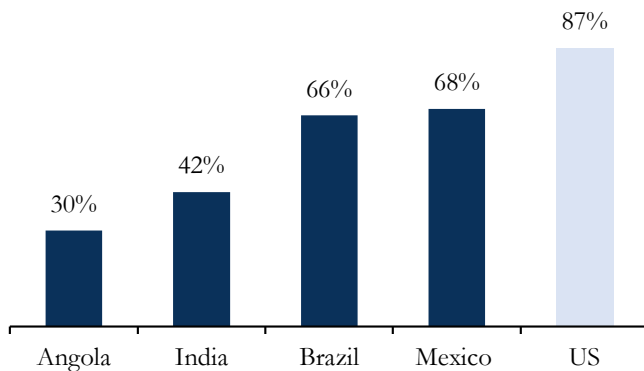
- Higher revenue and EBITDA growth business with stronger long-term outlook

Thesis Point 2: Emerging Markets

2018 Geographic Sales Breakdown



Internet Penetration



Joint Venture Activity

Yahsat JV Provides Access to Brazilian Market – May 6th, 2019

- EchoStar entered into a JV with global satellite operator Yahsat to provide commercial broadband service in Brazil
- JV combines SATS and Yahsat satellite assets to reach ~95% of Brazil's population, will see incremental capacity from Jupiter 3

Mexico Service Roll-Out – October 1st, 2019

- EchoStar began offering HughesNet in Mexico
- Internet penetration in rural communities is ~14% vs. ~86% in urban areas

JV with Bharti Airtel – May 7th, 2019

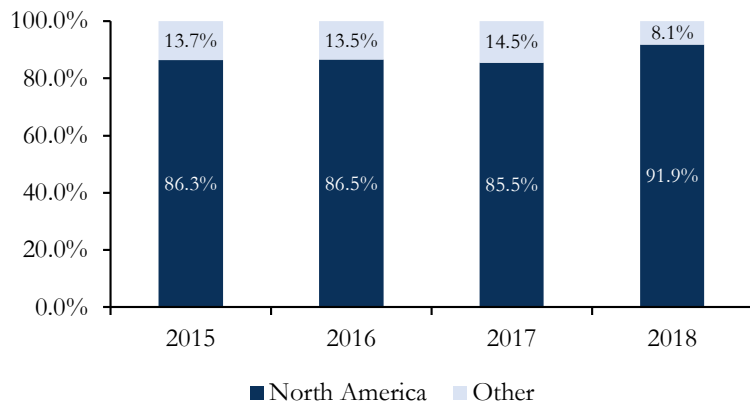
- EchoStar & Bharti Airtel (India's leading telecom services provider) announced agreement to combined VSAT operations in India
- Combined entity will bring greater scale, operational efficiencies and market reach to serve India with secure and reliable broadband satellite and hybrid solutions

JV with Yahsat – September 10th, 2018

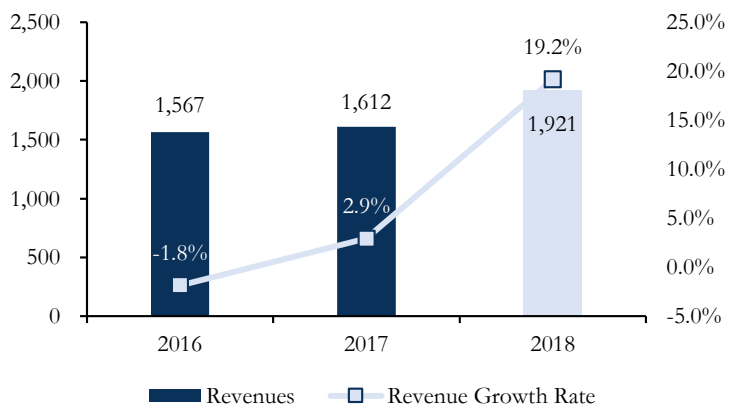
- EchoStar & Yahsat, a UAE-based global satellite operator announced a JV to provide commercial satellite broadband services across Africa, the Middle East and SW Asia
- Yahsat is the leader in satellite broadband solutions across these geographies making a JV an attractive means of entry for SATS into these markets

Thesis Point 3: Jupiter 3 Growth

Revenue by Geography



North America Sales Performance



Strategic Rationale

EchoStar has seen its latest Jupiter 2 Satellite which covers the North American market reach capacity in record time (~2.5 years). Jupiter 3 is expected to launch in 2021 and will offer 500 Gbps of total throughput (vs. 220 Gbps on Jupiter 2) and speeds of up to 100 Mbps.

Tangible Catalyst Mid-Hold

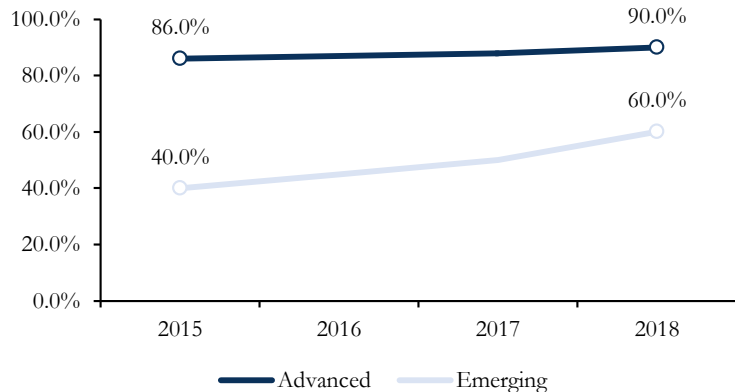
- Management guides ~10% penetration in North America indicating ample demand for Jupiter 3 which is planned to launch in 2021
- 2021 launch of Jupiter 3 is a tangible catalyst which will allow EchoStar to return to the North American market as a growth center going forward
- NA generates higher ARPUs than other geographies (i.e. Central / South America)
- The new technology onboard Jupiter 3 will lower the craft's cost per bit, creating the potential for margin expansion

Jupiter 3 Already Seeing Demand

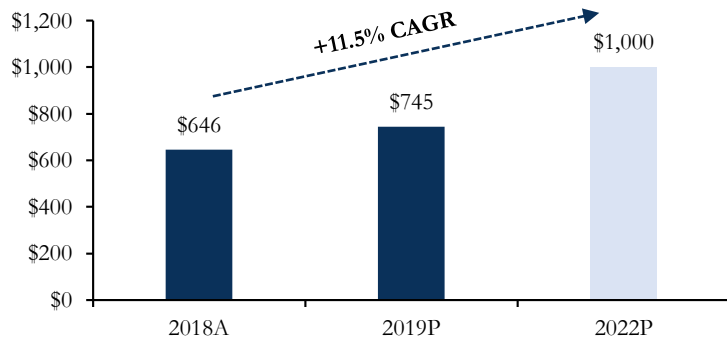
- Xplornet Communications Inc., Canada's leading rural broadband provider, had agreed to a lifetime capacity agreement on the Company's EchoStar XXIV satellite
- The contract is valued at ~\$250MM over 15 years and will provide capacity reaching over 90% of Canada

Thesis Point 4: Megatrend Upside

Internet Use – Emerging Economies



IoT Spending Outlook (\$ in B)



Positive Megatrend Exposure

Growth of Internet Usage in Emerging Economies

- Targeting Brazil, India and other emerging markets gives SATS access to a rapidly expanding and underpenetrated market for internet accessibility
- +14.5% CAGR for emerging markets internet usage over previous three-year period
- Internet access rates in emerging markets such as Brazil lag North American and EU averages

5G & IoT Infrastructure Build-Outs

- S-band spectrum assets position the company to incorporate satellite connectivity into the next generation of 5G and IoT networks

Helios Wire Corporation Acquisition

- On October 25th, 2019 EchoStar announced that it had acquired Helios Wire Corporation (“Helios”), a Canadian satellite-enabled IoT connectivity company
- Included in the transaction was Helios’ Australian subsidiary (Sirion Holdings) which holds global spectrum rights for S-band Mobile Satellite Services

Thesis Risks

1 New Competition from Innovative Players

- New companies, such as SpaceX, and Amazon's Blue Origin, are pushing into Satellite BB space

2 Execution Risk

- Future growth is partly predicated on maintaining and growing JVs, integrating new bolt-ons, and successfully deploying capital expenditures to meet demand

3 Increased Exposure to International Markets

- Satellite market access, landing rights, and terrestrial wireless rights are dependent on national regulations that are subject to change
- Reliance on more volatile emerging markets economies

While market disruption remains the most tangible threat to EchoStar's business, the Company has a cushion even under worst case assumptions. Assuming utilization across the entire fleet falls from its current level of 100% to 95% over the forecast period, the low end of our terminal multiple and perpetuity DCF approaches yields a fair value of ~\$42.

3. Valuation

Valuation Methodologies

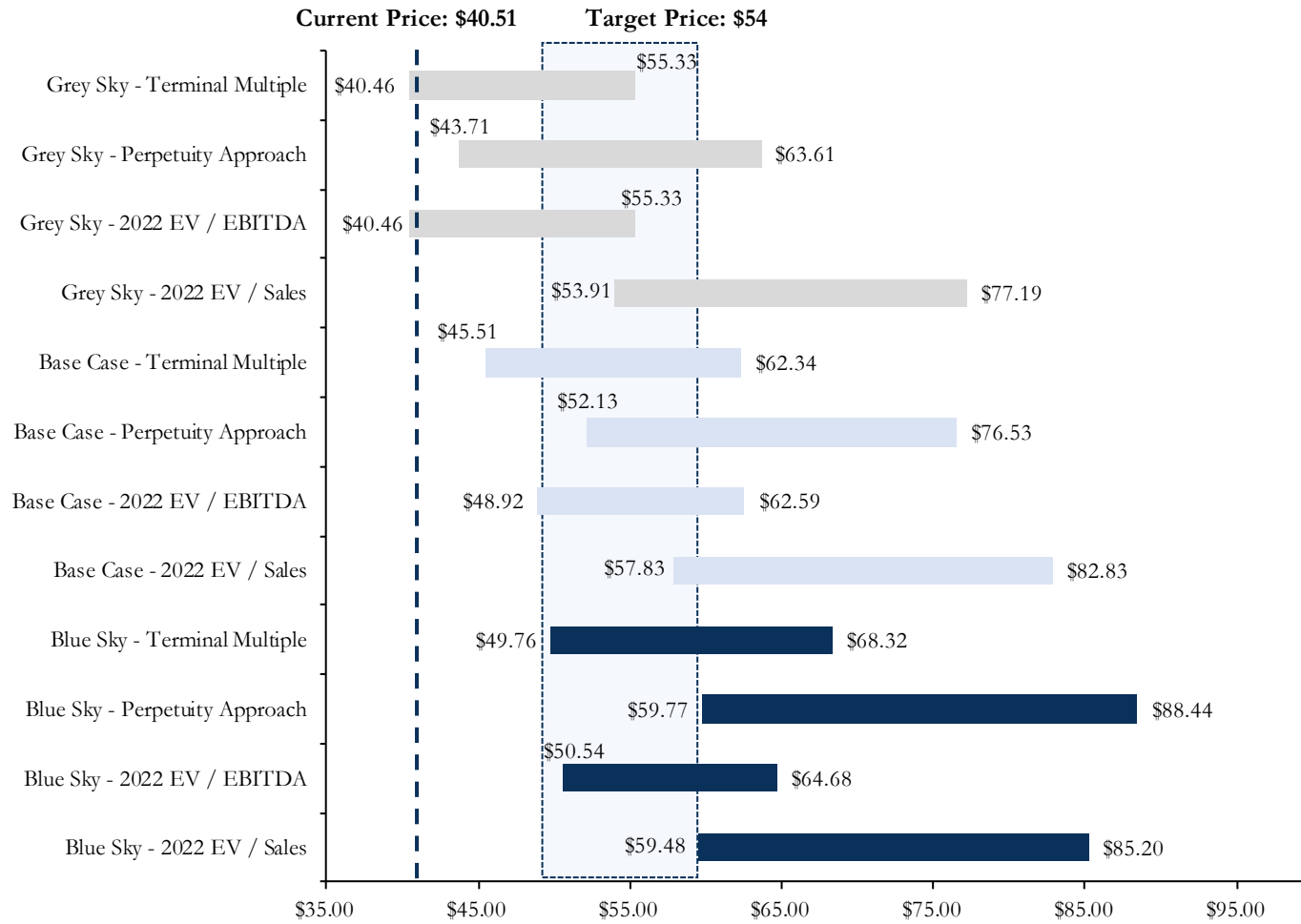
Comparable Trading Multiples

- EV/ EBITDA
- EV / Sales

Discounted Cash Flow

- Terminal Multiple Approach
- Perpetuity Approach

Valuation Football Field



Discounted Cash Flow Analysis

Discounted Cash Flow Valuation						
\$ in MM; FYE 12/31	2019P	2020P	2021P	2022P	2023P	2024P
Top-Down Unlevered Free Cash Flow (ULFCF) Calculations						
EBITDA	\$716	\$648	\$659	\$690	\$719	\$744
Less: Depreciation & Deductible Amortization	(\$507)	(\$295)	(\$296)	(\$300)	(\$307)	(\$313)
EBIT	\$209	\$353	\$364	\$391	\$413	\$430
Less: Taxes	(\$43)	(\$72)	(\$74)	(\$79)	(\$84)	(\$87)
Tax-Effectuated Unlevered Taxable Income - Tax adjusted EBIT	\$167	\$281	\$290	\$311	\$329	\$343
Plus: Depreciation & Deductible Amortization	\$507	\$295	\$296	\$300	\$307	\$313
Plus: Working Capital Surplus / (Deficiency)	(\$27)	(\$16)	(\$2)	\$14	\$22	\$34
Less: Capital Expenditures	(\$429)	(\$256)	(\$256)	(\$256)	(\$256)	(\$256)
Unlevered Free Cash Flow	\$218	\$305	\$327	\$369	\$401	\$434
Discount Periods	\$1	\$2	\$3	\$4	\$5	\$6
Discount Rate - WACC	8.20%					
Present value of ULFCF	\$209	\$271	\$269	\$280	\$281	\$281
Sum of present value of ULFCF Mid Year Convention	\$1,592					
NPV	\$1,531					

Sensitivity Analysis Perpetuity Growth Method				
	1.3%	1.5%	1.7%	1.9%
7.2%	70.22	72.17	74.27	76.53
7.7%	64.63	66.25	67.98	69.83
8.2%	59.85	\$61.22	62.67	64.21
8.7%	55.73	56.89	58.11	59.41
9.2%	52.13	53.12	54.17	55.28

Sensitivity Analysis Terminal EBITDA Multiple				
	6.5x	7.0x	7.5x	8.0x
6.2%	54.04	56.81	59.57	62.34
7.2%	51.72	54.35	56.98	59.60
8.2%	49.53	\$52.03	54.53	57.02
9.2%	47.46	49.84	52.21	54.59
10.2%	45.51	47.77	50.02	52.28

Comparable Company Analysis

Market Multiples Analysis of Selected Satellite Services Companies									
(\$ in MM except per share data)	Stock Price	Market Value	Enterprise Value	Enterprise Value / LTM		LTM Margins			Total Debt /
Company	11/13/2019	of Equity	Value	Sales	EBITDA	Gross	EBITDA	EBIT	EBITDA
<u>Broadband Satellite Providers</u>									
Viasat, Inc. (VSAT)	\$71.94	\$4,414	\$6,154	2.7x	20.4x	28.8%	13.3%	0.8%	5.8x
<u>Diversified Satellite Providers</u>									
Intelsat (I)	\$14.43	\$2,035	\$16,020	7.7x	10.8x	81.6%	70.9%	38.8%	3.0x
Eutelsat Communications (ETL)	\$16.25	\$3,778	\$6,867	5.2x	7.1x	93.1%	73.0%	38.9%	3.0x
Inmarsat (ISAT)	\$5.59	\$2,610	\$4,293	3.7x	7.6x	70.3%	48.7%	21.5%	3.0x
SES (SESG)	\$14.45	\$6,568	\$10,313	5.2x	8.5x	74.0%	60.9%	24.1%	3.0x
Iridium Communications Inc. (IRDM)	\$24.14	\$3,158	\$4,927	8.9x	16.3x	73.9%	54.6%	1.8%	5.8x
Top Quartile	\$12.22	\$2,466	\$4,769	3.5x	7.5x	59.9%	39.9%	1.6%	3.0x
Mean	\$24.47	\$3,760	\$8,096	5.6x	11.8x	70.3%	53.6%	21.0%	3.9x
Median	\$15.35	\$3,468	\$6,511	5.2x	9.7x	74.0%	57.8%	22.8%	3.0x
Bottom Quartile	\$36.09	\$4,952	\$11,740	8.0x	17.3x	84.5%	71.4%	38.8%	5.8x
EchoStar Corporation (SATS)	\$40.72	\$3,974	\$3,935	1.8x	4.8x	62.9%	38.7%	11.2%	-0.1x

Comparable Company Analysis (cont.)

Forward Market Multiples Analysis of Selected Satellite Services Companies					
Name	Ticker	BF EV/EBITDA	BF EV/EBIT	BF EV/Rev	LF P/BV
EchoStar Corp	SATS	6.1x	17.1x	2.0x	1.1x
Current Premium to Comps Mean		-34.7%	n/a	-60.3%	-39.4%
Mean (Including SATS US)		9.3x	19.2x	5.0x	1.8x
<u>Broadband Satellite Providers</u>					
ViaSat Inc	VSAT	11.3x	74.5x	2.5x	2.2x
<u>Diversified Satellite Providers</u>					
Intelsat SA	I	11.1x	21.2x	7.8x	--
Eutelsat Communications SA	ETL	6.8x	13.6x	5.3x	1.4x
Inmarsat PLC	ISAT	7.8x	21.9x	3.9x	2.9x
SES SA	SESG	8.3x	20.3x	5.1x	1.0x
Iridium Communications Inc	IRDM	13.6x	n/a	8.3x	2.0x

4. Appendix

Appendix A: Senior Leadership

Charles W. Ergen - Chairman



- Founded Owns 2.2MM Class A (\$86MM MV) and 47.7MM Class B shares of the common equity, controlling ~72% of SATS voting power
- Founded EchoSphere in 1987 selling satellite dishes
- Company went public as EchoStar in 1995
- 2007 Company renamed Dish Network, EchoStar spun-off from DISH January 1st, 2018

Anders N. Johnson – Chief Strategy Officer (previously President of ESS)



- Responsibility for coordinating strategic initiatives and corporate development across the company as well as directing EchoStar Satellite Services.
- Mr. Johnson was previously SVP of Strategic Satellite Development at SES World Skies
- Prior to SES worked at GE in a variety of executive-level roles including Satellite Services, Aviation Services and Transportation & Industrial Financing.

Michael T. Dugan – CEO & President



- Named the Company's CEO & President Nov. '19
- Has served as a member of board of directors since October 2007
- Began EchoStar career as VP of Engineering in 1990 - credited with being the chief architect behind the technological foundation for DISH Network and EchoStar.

Pradman P. Kaul – CEO & President, Hughes Network Systems



- Became a member of board of directors August 2011.
- Also serves as the President of Hughes Network Systems, LLC (“HNS”) and Hughes Communications, Inc., subsidiaries of EchoStar.
- Master's degree in electrical engineering from the University of California at Berkeley.
- Holds numerous patents, has been inducted as a member of the National Academy of Engineering.

Appendix B: Satellite Fleet

Satellites	Segment	Launch Date	Depreciable Life (yrs.)
Owned			
SPACEWAY 3	Hughes	August 2007	4
EchoStar XVII	Hughes	July 2012	7
EchoStar XIX	Hughes	December 2016	7
EchoStar IX	ESS	August 2003	4
EchoStar XXI	Corporate & Other	June 2017	7
EUTELSAT 10A ("W2A")	Corporate & Other	April 2009	n/a
Capital Leases			
Eutelsat 65 West A	Hughes	March 2016	7
Telesat T19V	Hughes	July 2018	7
EchoStar 105/SES-11	ESS	October 2017	7

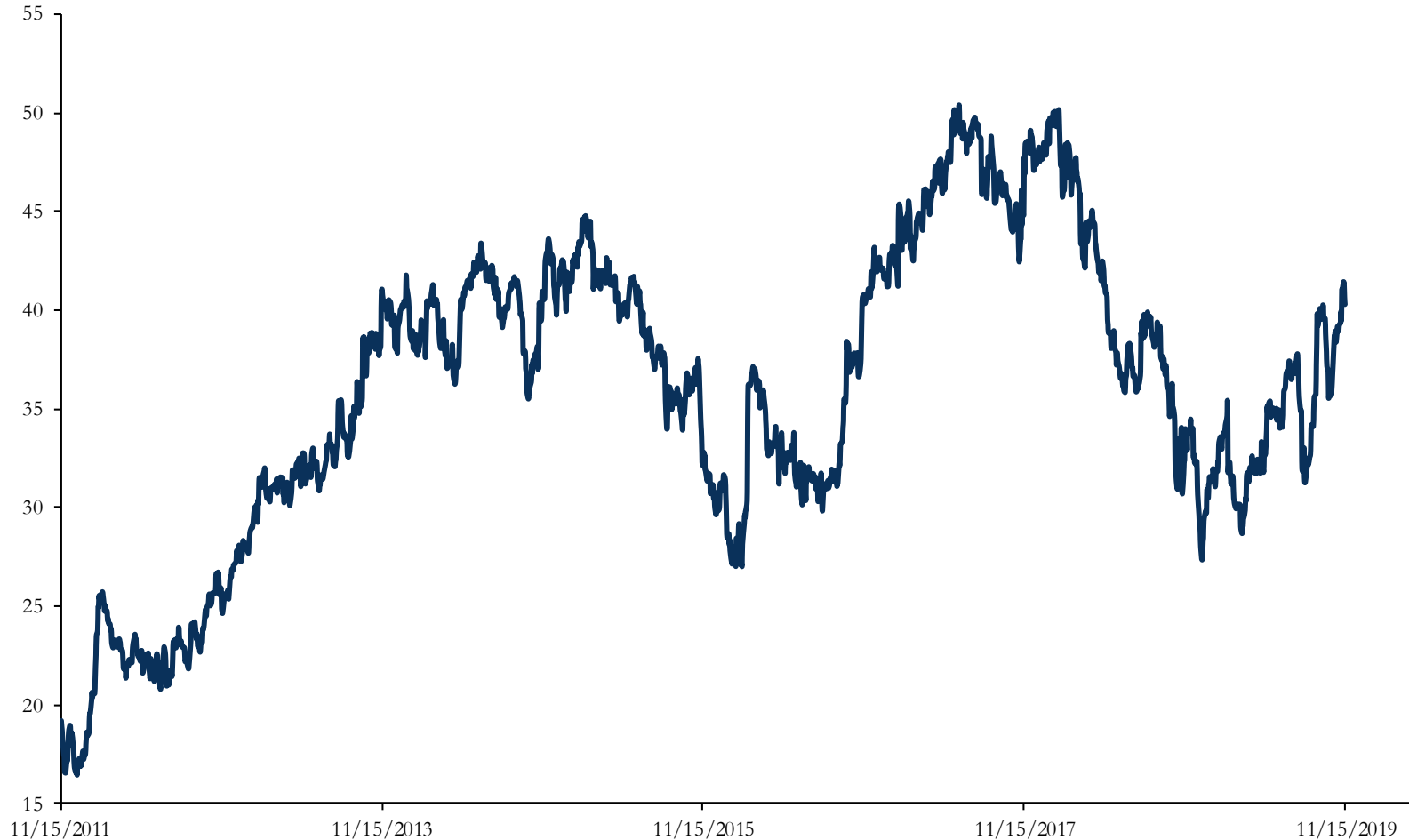
Appendix C: Football Field Detail

Football Field		Valuation			Inputs			
Valuation Methodology	Low	Low	High	2021	Low	High	Net Debt	Shares
Blue Sky	Blue Sky - 2022 EV / Sales	\$59.48	\$85.20	\$2,040	2.8x	4.0x	(\$64)	96.53
	Blue Sky - 2022 EV / EBITDA	\$50.54	\$64.68	\$713	6.8x	8.7x	(\$64)	96.53
	Blue Sky - Perpetuity Approach	\$59.77	\$88.44					
	Blue Sky - Terminal Multiple	\$49.76	\$68.32					
Base Case	Base Case - 2022 EV / Sales	\$57.83	\$82.83	\$1,983	2.8x	4.0x	(\$64)	96.53
	Base Case - 2022 EV / EBITDA	\$48.92	\$62.59	\$690	6.8x	8.7x	(\$64)	96.53
	Base Case - Perpetuity Approach	\$52.13	\$76.53					
	Base Case - Terminal Multiple	\$45.51	\$62.34					
Grey Sky	Grey Sky - 2022 EV / Sales	\$53.91	\$77.19	\$1,847	2.8x	4.0x	(\$64)	96.53
	Grey Sky - 2022 EV / EBITDA	\$40.46	\$55.33	\$635	6.8x	8.7x	(\$64)	96.53
	Grey Sky - Perpetuity Approach	\$43.71	\$63.61					
	Grey Sky - Terminal Multiple	\$40.46	\$55.33					

Appendix D: Income Statement

Operating Model for EchoStar Corporation \$ in Thousands FYE 12/31	Projection Period					
	Year 1 2019	Year 2 2020	Year 3 2021	Year 4 2022	Year 5 2023	Year 6 2024
Sales and Operating Revenues						
Services & Other Revenue - DISH Network	195,339	41,215	36,252	31,936	28,921	27,067
Services & Other Revenue - Other	1,579,688	1,602,091	1,633,676	1,713,187	1,787,205	1,849,720
Equipment Revenue	236,172	242,123	239,501	237,781	236,652	235,912
Net sales	2,011,198	1,885,429	1,909,429	1,982,904	2,052,779	2,112,699
<i>% growth - yoy</i>	<i>(3.8%)</i>	<i>(6.3%)</i>	<i>1.3%</i>	<i>3.8%</i>	<i>3.5%</i>	<i>2.9%</i>
Cost of Sales - Svs. & Other (Exd. Depr. & Amort.)	568,650	526,452	534,980	559,070	581,817	601,250
Cost of Sales - Equipment (Exd. Depr. & Amort.)	190,712	195,517	193,400	192,011	191,099	190,501
Cost of Sales - Total	759,362	721,969	728,380	751,081	772,916	791,752
Gross profit	1,251,837	1,163,460	1,181,048	1,231,823	1,279,863	1,320,947
<i>% of sales</i>	<i>62.2%</i>	<i>61.7%</i>	<i>61.9%</i>	<i>62.1%</i>	<i>62.3%</i>	<i>62.5%</i>
Selling, general, and administrative expenses	509,829	490,212	496,451	515,555	533,722	549,302
Research & Development Expenses	25,618	24,855	25,172	26,140	27,061	27,851
Depreciation & Amortization	507,204	295,454	295,672	299,593	306,507	313,448
Other	-	-	-	-	-	-
Total OPEX	1,042,650	810,521	817,295	841,288	867,290	890,601
EBIT	209,187	352,940	363,753	390,535	412,572	430,346
EPS - Basic	0.12	0.54	0.86	1.24	1.44	1.63
EPS - Diluted	0.12	0.54	0.86	1.23	1.43	1.62
<i>Diluted EPS Growth</i>	<i>-70.2%</i>	<i>338.1%</i>	<i>58.6%</i>	<i>43.5%</i>	<i>16.4%</i>	<i>13.2%</i>
Weighted average shares outstanding - Basic	87,171	86,359	85,548	84,737	83,926	83,114
Dilution impact	453	453	453	453	453	453
Weighted average shares outstanding - Diluted	87,624	86,812	86,001	85,190	84,379	83,567
EBITDA Reconciliation						
EBIT	209,187	352,940	363,753	390,535	412,572	430,346
(+) Depreciation & Amortization	507,204	295,454	295,672	299,593	306,507	313,448
EBITDA	716,390	648,393	659,425	690,128	719,079	743,794

Appendix E: 5 Yr. Trading History



Appendix F: Historical Valuation



Appendix G: Analyst Rating History



Upgrade following Q3 2019 earnings release

Appendix H: Top Holders

Insider - Based on Last 6 Months				
52) Insider	11/10/19	Curr	Change	
21) % of Shares Held	4.54	4.57	+0.03	📈
22) % Chg Insider Positions	+196.11	+198.35	+2.24	📈
23) # of Insiders	9	9	0.00%	📈
24) # of Buyers Opn Mkt	0	0		📈
25) # of Sellers Opn Mkt	1	1	0.00%	📈
26) # of Shrs Bought Opn Mkt	0	0		📈
27) # of Shrs Sold Opn Mkt	200,000	309,801	+54.90%	📈
28) Avg Opn Mkt Buy Price	0	0	0.00	📈
29) Avg Opn Mkt Sell Price	40.94	41.02	+0.08	📈
Top Ownership Type (%)				
54) Ownership Type	11/10/19	Curr	Change	
41) Investment Advisor	67.53	66.4	-1.13	📈
42) Hedge Fund Manager	21.29	23.56	+2.27	📈
43) Individual	4.28	3.9	-0.38	📈
44) Pension Fund	2.62	2.25	-0.37	📈
45) Sovereign Wealth Fund	2.02	1.82	-0.20	📈
46) Bank	1.55	1.4	-0.15	📈
47) Insurance Company	0.46	0.42	-0.04	📈
48) Government	0.18	0.17	-0.01	📈
49) Brokerage	0.04	0.05	+0.01	📈

Positive flows from insiders and hedge funds.

Appendix H: Relative Valuation

SATS US Equity		Export		Settings		Equity Relative Valuation											
Comp Source My Comp Groups		Name VSAT				Curr USD											
vs Comps		Group Dynamics		vs Self													
Analysis of SATS US Multiples - Premium to Comps																	
Current vs 5Yr Average Historical Premium						5Yr Historical Premium Range		3M		6M		1Yr		2Yr		5Yr	
Metric	Current	Hist Avg	Diff	# SD	3M Trend	Low	Range	High	Implied @ Hist Avg		Multiple		Price (USD)				
Current Price										Current		Hist Avg		40.51			
1) BF EV/EBITDA	-35%	-35%	0%	0.0		-57%		-11%	6.0x		39.19						
12) BF P/E	--	52%	--	--		-41%		313%	35.8x		--						
13) BF EV/EBIT	--	1% *	--	--		-33%		73%	19.5x		--						
14) BF EV/Rev	-60%	-59%	-1%	-0.1		-75%		-34%	2.1x		41.94						
15) LF P/BV	-39%	-54%	14%	1.2		-73%		-25%	0.8x		30.93						
										9) View All Comps Below							
Summary of Current Multiples																	
Name	2Y Corr	Mkt Cap (USD)	BF EV/EBITDA	BF P/E	BF EV/EBIT	BF EV/Rev	LF P/BV										
1) EchoStar Corp		3.95B	6.1x	28.1x	17.1x	2.0x	1.1x										
Current Premium to Comps Mean			-35%	--	--	-60%	-39%										
Mean (Including SATS US)		4.08B	9.3x	23.6x	19.2x	5.0x	1.8x										
2) ViaSat Inc	0.38	4.41B	11.3x	46.8x	74.5x	2.5x	2.2x										
3) Iridium Communications Inc	0.37	3.19B	13.6x	49.8x	1,290.7x	8.3x	2.0x										
4) Intelsat SA	0.25	1.89B	11.1x	261.3x	21.2x	7.8x	--										
5) Inmarsat PLC	0.12	3.36B	7.8x	34.9x	21.9x	3.9x	2.9x										
Grey values are excluded from group stats.										10) Analyze List							

EchoStar trades at a significant discount to peers on both a blended forward EV/EBITDA and EV/Revenue basis.